

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0897

Investigator: J M S

DC REM

Requestor: Roger Lupo

RHB

San Louis Obisp CA CA

CDPH - RHB, 1500 Capitol Av., MS 7610 95814-5006

Sacramento

Phone Number: 916-440-7955

Phone Number:

Site/Project Name: San Onofre NPP / SONGS B / 4th Qtr 2013

System No:

Billing Agency: RHB

Samples Received by Lab: 10/24/2013

Parameter Method Result +/- CE MDA 95 Units Lab No: 13-0897-01 Sample ID: R 94054 Time Collected: 10/22/2013 10:46 Sampling Point: Sediment Sample Type: Soil/Sediment Dry Wt/Wet Wt 0.768 K-40 HASL Ga-01-R 14.3 +/- 0.326 0.238 pCi/g dry wt

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	REQUEST FOR SAMPI		The second secon	
Drinking Water and Radia 850 Marina Bay Parkway, (: 18 2°C	193	13-0497
Richmond, CA 94804 510-620-2911		Date & Time 5	Sampled [0:46	R 94054
Collector Information		Reporting Informa	ation	
Name:		Name:		
Dept./Branch:		Dept./Branch: Address:		
Address: J /		Addiess.		
◆Telephone No.:		Telephone No.:		
Sample Information	- 12 P	Billing Agency		
System Name / Facility: < Sampling Point (s):	Songs 13		☐ RHB ☐ RV	WQCB() DTSC WR DCDFG
		☐ EMB		y)
System No.:				
TYPE OF SAMPLE (Check				
☐ Drinking Water	☐ Groundwater☐ Water Treatment Plant (WTI	☐ Surface Water Distribution Systems	U	Wastewater Point of Use (POU)
	Water Treatment Plant (WTI hlorinated / Chlorine D			
I feated (Circle one). On	Johnsted / Chlorammated / Chloring 5	//OXIGE / Ozonated / To.		
☐ Air Filters	Date/Time	☐ Seawater		Sludge (Semi-solid Samples)
Finishing:		Milk Mark		Soil/Sediment
Starting:		☐ Wipes	Ō	Biota (Type):
Net (M³)	<u>kana l</u> ijah dalah dalah da	☐ Radon Canister		Other:
Air Charcoal Cartridge				
COMMENTS: (Cautions, e	etc.):servatives added:		Othe	
	mR/hr), ir known:	
	e prearranged and have supervisory ap		and the special constraints	ali Mgalani samingan pampagan ang kalanggan at Tanggan
ANALYSIS REQUESTED ((For questions, please call 510-620-29	J11)	Particle Baseline	
☐ Gross Alpha	☐ Gross B		☐ Gamma Scar	
☐ Total Uranium	☐ Total Be	· · · · · · · · · · · · · · · · · · ·	□ NORM (Gam	
☐ Total Radium	☐ Tritium	(³ H)	☐ Isotopic Ame	
☐ Radium-226	Carbon-		☐ Isotopic Pluto	
☐ Radium-228	☐ lodine-1		☐ Isotopic Thor	rium de la
☐ Radon-222	☐ Strontiu	um-89, 90	☐ Isotopic Uran	nium.iga ari estato en interesi que
Other (Specify);	☐ Nickel-6	63	☐ Iron-55	
CHAIN OF CUSTODY				
1. Date	Name (Print)	$\label{eq:continuous} \begin{array}{cccccccccccccccccccccccccccccccccccc$		Date
Time Custody Received	Organization	Signature		Time Custody Released
2. Date	Name (Print)			Date
Time Custody Received	Organization U W-	Signature		Time Custody Released
3. 10-27-13 Date	Name (Print)	19-1	- AI MI	Date
11:00	DWKCD		orial Alt	<u> </u>
Time Custody Received	Organization	Signature		Time Custody Released
LABORATORY REMARKS				
A. Condition at Time of Rec		☐ Leaked in Trans		☐ Improper Container
☐ Holding Time Exceed	A CONTRACTOR OF THE CONTRACTOR	☐ Insufficient Sam		
B. Preservatives/Carriers:				
☐ Added While Samplin	ing Added in Laboratory	☐ Not Added		□ Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0898

Investigator: J M S

DC REM

Requestor: Roger Lupo

RHB

San Louis Obisp CA CDPH - RHB, 1500 Capitol Av., MS 7610

CA 95814-5006

Sacramento

Task ID: 13-0898

Phone Number:

Site/Project Name: San Onofre NPP / SONGS C / 4th Qtr 2013

Phone Number: 916-440-7955

System No:

Billing Agency: RHB

Samples Received by Lab: 10/24/2013

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0898-01	Sample ID: R 94055 Sample Type: Soil/Sediment	Time Collected: 10/22/2013 09:	28 Sampling Poir	nt: Sediment
Dry Wt/Wet Wt		0.814		
K-40	HASL Ga-01-R	14.3 +/- 0.326	0.295	pCi/g dry wt

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

Drinking Water and Rad 850 Marina Bay Parkway, Richmond, CA 94804	iation Laboratory Branch	Date Received (0-24-13	Lab No. (Leave Blank)
510-620-2911		Date & Time Sampled	R 94055
Collector Information Name: Dept./Branch: Address:	INS	Reporting Information Name: Dept./Branch: Address:	N 34033
Telephone No.:		Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): System No.:	Songr C	Billing Agency DWFOB() RHB I P DWTPB FDB I	RWQCB() DTSC DWR DCDFG
TYPE OF SAMPLE (Check ☐ Drinking Water ☐ Raw ☐ Treated (circle one): Ci	☐ Groundwater☐ Water Treatment Plant (WT	☐ Surface Water ☐ ☐ Distribution System ☐ Dioxide / Ozonated / Peroxizone / Fluorid	☐ Wastewater☐ Point of Use (POU)
	Date/Time	☐ Seawater ☐ Milk ☐ Wipes ☐	Sludge (Semi-solid Samples) Soil/Sediment Biota (Type): Other:
Field Treatment: Pres	etc.):servatives added:	lced/Frozen: Oth Radionuclide(s), if known:	er:
	prearranged and have supervisory ap		
ANALYSIS REQUESTED	(For questions, please call 510-620-29	11) # 145 (# 4) # 1 1 1 1 1 1 1 1 1 1	
Gross Alpha	☐ Gross B		an Core of the core
☐ Total Uranium	☐ Total Be		mma)
☐ Total Radium	☐ Tritium (ericium / Curium
Radium-226	☐ Carbon-		tonium alie way ay fall a life.
Radium-228	lodine-1		
Radon-222	☐ Strontiur		inium y die dat die gewalde g
Other (Specify); CHAIN OF CUSTODY	□ Nickel-6	3 <u>I Iron-55</u>	
• 1.			
Date	Name (Print)		Date
Time Custody Received 2.	Organization	Signature	Time Custody Released
Date	Name (Print)		Date
Time Custody Received 3.	Organization U At	Signature	Time Custody Released
Date \1:00 Time Custody Received	Name (Print) Organization	Dutown W. Ola	Date
The Control of the Co	Paragraphia curt for the constitution of the	Signature	Time Custody Released
LABORATORY REMARKS A. Condition at Time of Rec Acceptable Holding Time Exceed	eipt: Broken Container	☐ Leaked in Transit ☐ Insufficient Sample	Improper Container
B. Preservatives/Carriers: Added White Samplin	ig 🔲 Added in Laboratory	☐ Not Added	☐ Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0899

Investigator: J M S

DC REM

Requestor: Roger Lupo

RHB

San Louis Obisp

CDPH - RHB, 1500 Capitol Av., MS 7610

CA

Sacramento

95814-5006 CA

Phone Number:

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / SONGS D / 4th Qtr 2013

System No:

Billing Agency: RHB

Samples Received by Lab: 10/24/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0899-01

Sample Type: Soil/Sediment

Sample ID:

R 94056

Time Collected: 10/22/2013 10:05

Sampling Point: Sediment

Dry Wt/Wet Wt

0.787

K-40

HASL Ga-01-R

16.9 +/- 0.369

0.253

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

850 Marina Bay Parkway,	ation Laboratory Branch G164	Date Received 10-24-13	Lab No. (Leave Blank) 13-0899
Richmond, CA 94804 10-620-2911		Date & Time Sampled 10:05	R 94056
ollector Information lame: ept./Branch: ddress:) NS	Reporting Information Name: Dept./Branch: Address:	
elephone No.:		Telephone No.:	
ample Information ystem Name / Facility: ampling Point (s):	Souge D	Billing Agency DWFOB() RHB FDB DWTPB FDB	RWQCB() DTSC DWR D CDFG
ystem No.:			***************************************
YPE OF SAMPLE (Check I Drinking Water I Raw I Treated (circle one): C	☐ Groundwater☐ Water Treatment Plant (\)	☐ Surface Water WTP) ☐ Distribution System ne Dioxide / Ozonated / Peroxizone / Fluorid	Point of Use (POU)
Air Filters	Date/Time	☐ Seawater ☐	3 Sludge (Semi-solid Samples
Finishing:			Soil/Sediment
Starting:		and the second of the second o	Biota (Type):
Net (M ³).		Radon Canister	Other:
Air Charcoal Cartridge			
OMMENTS: (Cautions, e	stc.):		
Field Treatment: Pres	servatives added:	lced/Frozen: _, Oth	er:
		☐ Radionuclide(s), if known:	
	e prearranged and have supervisory	the contract of the contract o	
NALYSIS REQUESTED	(For questions, please call 510-620	-2911)	
Gross Alpha	Gros	ss Beta Gamma Sc	an isomorphisms
Total Uranium	🗓 . Milás szerjeszterépet 🗖 Total	il Beta (LSC)	mma)
Total Radium	Tritiu	ım (³H) ☐ Isotopic Am	ericium / Curium
Radium-226	Carb	oon-14	tonium
Radium-228	lodin	ne-131 🔲 Isotopic The	orium .
	□ ∾		
Radon-222	☐ Stror	ntium-89, 90 🔲 Isotopic Ura	nium
Other (Specify);	☐ Stror		nium
Other (Specify);			nium
Other (Specify);			Date
Other (Specify);	□ Nicke		
Other (Specify); IAIN OF CUSTODY Date	Name (Print)	el-63	Date
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Other (Specify); HAIN OF CUSTODY Date Time Custody Received Date Time Custody Received	Name (Print) Organization Name (Print) Organization UA	el-63 Iron-55	Date Time Custody Released Date
Other (Specify); HAIN OF CUSTODY Date Time Custody Received Date Time Custody Received	Name (Print) Organization Name (Print) Organization	el-63 Iron-55	Date Time Custody Released Date Time Custody Released
Other (Specify); HAIN OF CUSTODY Date Time Custody Received Date Time Custody Received Date Time Custody Received Date Time Custody Received Date ABORATORY REMARKS	Name (Print) Organization Name (Print) Organization VA Name (Print) DWRLB Organization	Signature Signature Sultarenti-Ott	Date Time Custody Released Date Time Custody Released Date
Other (Specify); IAIN OF CUSTODY Date Time Custody Received Date Time Custody Received Date Time Custody Received Date Time Custody Received BORATORY REMARKS Condition at Time of Received	Name (Print) Organization Name (Print) Organization VA Name (Print) Organization S (Leave Blank)	Signature Signature Signature	Date Time Custody Released Date Time Custody Released Date Time Custody Released
Other (Specify); HAIN OF CUSTODY Date Time Custody Received Date Time Custody Received Date Time Custody Received Date Time Custody Received Date Date SORATORY REMARKS	Name (Print) Organization Name (Print) Organization VA Name (Print) Organization Cleave Blank) Selpt:	Signature Signature Sultarenti-Ott	Date Time Custody Released Date Time Custody Released Date
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State of California - Health and Human Services Agency

California Department of Public Health





Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0900

Investigator: J M S

DC REM

Requestor: Roger Lupo

RHB

CDPH - RHB, 1500 Capitol Av., MS 7610

San Louis Obisp

Sacramento

95814-5006

Phone Number:

CA Phone Number: 916-440-7955

System No:

Site/Project Name: San Onofre NPP / SONGS F / 4th Qtr 2013 Billing Agency: RHB

Samples Received by Lab: 10/24/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0900-01

R 94057 Sample ID:

Time Collected: 10/22/2013 13:01

Sampling Point: Songs F

Sample Type: Soil/Sediment

Dry Wt/Wet Wt

0.770

K-40

HASL Ga-01-R

14.5 +/- 0.337

0.310

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

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	LE ANALYSIS (Radiochemical)
Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164	Date Received Lab No. (Leave Blank)
Richmond, CA 94804	
510-620-2911	10-22-13 13:01 R 94057
Collector Information Name: A 1	Reporting Information
Dept./Branch: \V	Name: Dept./Branch:
Address: J >	Address:
Telephone No.:	Telephone No.:
Sample Information	Billing Agency
System Name / Facility: Sampling Point (s): SOUGE F	□ DWFOB() □ RHB □ RWQCB() □ DTSC □ DWTPB □ FDB □ DWR □ CDFG
System No.:	DWTPB DFDB DWR DCDFG DEMB DOther (Specify)
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater	☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP)	P) Distribution System Point of Use (POU)
Treated (circle one): Chlorinated / Chloraminated / Chlorine Dic	oxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	☐ Seawater ☐ Sludge (Semi-solid Samples)
Finishing:	☐ Milk Soil/Sediment
Starting:	☐ Wipes ☐ Biota (Type):
Net (M³) Air Charcoal Cartridge	□ Radon Canister □ Other:
COMMENTS: (Cautions, etc.):	
Field Treatment: Preservatives added:	lced/Frozen: Other:
☐ Field Measurement:mR/hr ☐ Rush/Priority (should be prearranged and have supervisory app	
ANALYSIS REQUESTED (For questions, please call 510-620-291) Gross Alpha Gross Be	
	eta
☐ Total Radium ☐ Tritium (3)	
□ Radium-226 □ Carbon-1	
□ Radium-228 □ Iodine-13	
□ Radon-222 □ Strontium	
Other (Specify); Nickel-63	☐ Iron-55
CHAIN OF CUSTODY 1.	
Date Name (Print)	Date Date
Time Custody Received Organization	Signature Time Custody Released
2. Date Name (Print)	Date
Time Custody Received Organization 3. UA	Signature Time Custody Released
Date 11:00 Name (Print) DURIS	Vulory M. Ol. Date
Time Custody Received Organization	Signature Time Custody Released
LABORATORY REMARKS (Leave Blank)	
A. Condition at Time of Receipt: □ Acceptable □ Broken Container	☐ Leaked in Transit ☐ Improper Containes
☐ Holding Time Exceeded ☐ Sample Not Cooled	☐ Leaked in Transit ☐ Improper Container ☐ Insufficient Sample
B. Preservatives/Carriers:	
☐ Added While Sampling ☐ Added in Laboratory	☐ Not Added ☐ Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0859

Investigator: RHM

RHB

Requestor: Roger Lupo

RHB

SAN ONOFRE

CDPH - RHB, 1500 Capitol Av., MS 7610

CA

CA

Sacramento

95814-5006

Phone Number:

Site/Project Name: San Onofre NPP / 4th Qtr 2013

Phone Number: 916-440-7955

System No:

Billing Agency: RHB

Samples Received by Lab: 10/10/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0859-01

Sample Type: Soil/Sediment

Sample ID:

R 94039

Time Collected: 10/8/2013 09:25

Sampling Point: Sediment,

SONGS E

Dry Wt/Wet Wt

K-40

HASL Ga-01-R

0.7694 18.4 +/- 0.413

0.255

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

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Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164		10-10-13	Lab No. (Leave Blank) 13-0859
Richmond, CA 94804 510-620-2911		Date & Time Sampled 10-8-13 9:25	R 94039
Collector Information		Reporting Information	
Name:		Name:	
Dept./Branch: Address:		Dept./Branch: Address:	
K	HM	, taress.	
Telephone No.:		Telephone No.:	
Sample Information System Name / Facility:	Songe E	Billing Agency	
Sampling Point (s):	Sorapie	DWFOB() RHB RWQ	CB() DTSC D CDFG
O		☐ EMB ☐ Other (Specify)	
System No.:			
TYPE OF SAMPLE (Check			
☐ Drinking Water ☐ Raw	☐ Groundwater ☐ Water Treatment Plant (WTP)	☐ Surface Water ☐ Wa	istewater
☐ Treated (circle one): Ch	plorinated / Chloraminated / Chlorine Dic	oxide / Ozonated / Peroxizone / Fluoridated	int of Use (POU)
	ioniated / Onloraninated / Onlorine Die	value / Ozoriated / Feloxizorie / Fluoridated	Coagulateu / pri Adjusted
☐ Air Filters	Date/Time	☐ Seawater ☐ Slu	dge (Semi-solid Samples)
Finishing:		☐ Milk So	I/Sediment
Starting:		☐ Wipes ☐ Bio	ta (Type):
Net (M ³)			ner:
Air Charcoal Cartridge			
	ervatives added:mR/hr	ced/Frozen: Other: _	
		The state of the s	
⊒ Rusn/Priority (should be	prearranged and have supervisory appr	roval) a silver desires y to gradient desir	
NALYSIS REQUESTED (For questions, please call 510-620-2911		Hydrichia (Gerlin)
Gross Alpha	☐ Gross Bel	ta 🚨 Gamma Scan	
Total Uranium	☐ Total Beta	a (LSC) INORM (Gamma)	
Total Radium	☐ Tritium (³ l		
Radium-226	☐ Carbon-14		
Radium-228	lodine-13		
Radon-222	☐ Strontium		
Other (Specify);	Nickel-63	☐ Iron-55	
HAIN OF CUSTODY		3 1017-00	
. <u>1 </u>			
Date	Name (Print)		Date
Time Custody Received	Organization	Signature	Time Custody Released
Date	Name (Print)		
			Date
Time Custody Received	Organization	Signature	Date Time Custody Released
	Name (Print)	Signature	
	1 14	Signature Signature	Time Custody Released
Date 15:45 Time Custody Received ABORATORY REMARKS	Name (Print) DURLB Organization (Leave Blank)	Delong 1 ale	Time Custody Released Date
Date 15:45 Time Custody Received ABORATORY REMARKS Condition at Time of Rec	Name (Print) DWRLB Organization (Leave Blank) eipt:	Delong 1 ale	Time Custody Released Date Time Custody Released
Date 15 '45 Time Custody Received ABORATORY REMARKS Condition at Time of Received	Name (Print) DWRLB Organization (Leave Blank) eipt:	Signature Subscent Ole	Time Custody Released Date
Time Custody Received ABORATORY REMARKS Condition at Time of Rec Acceptable Holding Time Exceeds Preservatives/Carriers:	Name (Print) Organization (Leave Blank) eipt: Broken Container ad Sample Not Cooled	Signature Leaked in Transit Insufficient Sample	Time Custody Released Date Time Custody Released
Date 15:45 Time Custody Received ABORATORY REMARKS Condition at Time of Rec Acceptable Holding Time Exceeds	Name (Print) Organization (Leave Blank) eipt: Broken Container ad Sample Not Cooled	Signature Leaked in Transit	Time Custody Released Date Time Custody Released



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0687

Investigator: Kathleen Harkness

RHB

Requestor: Roger Lupo

RHB

CA

500 S. Kraemer # 235,

CDPH - RHB, 1500 Capitol Av., MS 7610

92821

Sacramento

95814-5006

Phone Number: 714 524-1816

Phone Number: 916-440-7955

System No:

Site/Project Name: San Onofre NPP / Beach Sand / 3rd Qtr 2013

Billing Agency: RHB

Samples Received by Lab: 9/11/2013

Parameter

Method

R 91824

Result +/- CE

Time Collected: 9/5/2013

MDA 95

Units

Lab No: 13-0687-01

Sampling Point: Sediment / Loc

Sample ID: Sample Type: Soil/Sediment 17:50

#1 U-3 SE

Dry Wt/Wet Wt

K-40 HASL Ga-01-R 0.953 13.0 +/- 0.293

0.187

pCi/g dry wt

Page 1 of 1

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⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

California Department of Public Health REQUEST FOR SAMPLE ANALYSIS (Radiochemical) Sanitation and Radiation Laboratories Branch **Date Received** Lab No. (Leave Blank) 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 91512013- 1750 Reporting Information Collector Information K. Harkness RHB-Brea Name: Name: Roger RHB- Sacramento, CA Dept./Branch: Dept./Branch: Address: Address: Telephone No.: (916) Telephone No.: Sample Information **Billing Agency** System Name / Facility: D DWFOB () RHB RWQCB() ☐ DTSC Sampling Point (s): DWTPB O FDB ☐ DWR CDFG □ EMB ☐ Other (Specify) TYPE OF SAMPLE (Check all applicable boxes) Drinking Water Groundwater Surface Water ☐ Wastewater ☐ Water Treatment Plant (WTP) ☐ Distribution System Point of Use (POU) ☐ Raw Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted ☐ Air Filters Date/Time Seawater ☐ Sludge (Semi-solid Samples) Finishing: ☐ Milk Soil/Sediment Starting: Wipes ☐ Biota (Type): Net (M³) Radon Canister Other: Air Charcoal Cartridge COMMENTS: (Cautions, etc.): ☐ Field Treatment: Preservatives added: Iced/Frozen: Other: ☐ Field Measurement: mR/hr Radionuclide(s), if known: ☐ Rush/Priority (should be prearranged and have supervisory approval) ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta Gamma Scan ☐ Total Uranium ☐ Total Beta (LSC) NORM (Gamma) □ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium ☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium ☐ Radium-228 ☐ lodine-131 Isotopic Thorium ☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium Other (Specify); ☐ Nickel-63 Iron-55 **CHAIN OF CUSTODY** Name (Print) Time Custody Received Organization 2. Date Name (Print) Date **Time Custody Received** Organization Signature Time Custody Released 3. Date Name (Print) Date Time Custody Received Organization Time Custody Released LABORATORY REMARKS (Leave Blank) Condition at Time of Receipt: Acceptable Broken Container Leaked-in Transit Improper Container **Holding Time Exceeded** 0 Sample Not Cooled Insufficient Sample

a

Not Added

Not Applicable

Added in Laboratory

Preservatives/Carriers:

Added While Sampling



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0688

Investigator: Kathleen Harkness

RHB

Requestor: Roger Lupo

RHB

500 S. Kraemer # 235,

CA 92821

CDPH - RHB, 1500 Capitol Av., MS 7610

Phone Number: 714 524-1816

Sacramento

CA 95814-5006

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / Beach Sand / 3rd Qtr 2013

System No:

Billing Agency: RHB

Samples Received by Lab: 9/11/2013

Parameter	Method	Result +/- CE		MDA 95	Units
Lab No: 13-0688-01	Sample ID: R 91826 Sample Type: Soil/Sediment	Time Collected: 9/5/2013	17:15	Sampling Point:	Sediment / #2 Old Man's Beach
Dry Wt/Wet Wt		0.8756			
K-40	HASL Ga-01-R	16.8 +/- 0.366	5	0.242	pCi/g dry wt

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	REQUEST FUR SAMPLE		
Sanitation and Radiation Lal		Date Received	Lab No. (Leave Blank)
850 Marina Bay Parkway, G16 Richmond, CA 94804		7-11-12	15/06/88
510-620-2911		Date & Time Sampled	1
		9/5/2013@	1715 R 91826
Collector Information	HARKNESS	Reporting Information	~ ~ / 000
Name:		Name: Ros	or Cupo ato
Dept/Branch: RHB-	Brea	Address: RH	B-Sacration
Telephone No.: (7/4)	524-1816	Telephone No.: (916)	8-5acramento)440-7955
	ON65 Sediment	Billing Agency	
System Name / Facility:	on as seatther.	D DWFOB () RH	
	ach Sand		ner (Specify)
System No.: # 2 - 7	old MAN'S Boach	G LIVID G OU	iei (Opedity)
TYPE OF SAMPLE (Check all			
☐ Drinking Water	Groundwater Water Treatment Plant (WTP)	Surface Water	☐ Wastewater
Raw	☐ Water Treatment Plant (WTP)	Distribution System	Point of Use (POU)
Treated (circle one): Chlor	inated / Chloraminated / Chlorine Diox	ide / Ozonated / Peroxizon	e / Fluoridated / Coagulated / pH Adjuste
☐ Air Filters	Date/Time	Seawater	☐ Sludge (Semi-solid Samples)
Finishing:		Milk	Soil/Sediment
Starting:		Wipes	☐ Biota (Type):
Net (M ³)		Radon Canister	Other:
and the same of th		1/adolf Camister	G Oules.
☐ Air Charcoal Cartridge			
COMMENTS: (Cautions, etc.)			
☐ Field Treatment: Preserv	vatives added:	lced/Frozen:	Other:
☐ Field Measurement:	mR/hr	Radionuclide(s), if know	wn:
	earranged and have supervisory appr		
ANALYSIS REQUESTED (For	questions, please call 510-620-2911		
☐ Gross Alpha	☐ Gross Beta	5 4-6	amma Scan
☐ Total Uranium	☐ Total Beta	(ESC) D N	ORM (Gamma)
☐ Total Radium	☐ Tritium (³ H) s	otopic Americium / Curium
☐ Radium-226	☐ Carbon-14	🕶 🚨 Is	otopic Plutonium
☐ Radium-228	☐ lodine-131	₫ D Iso	otopic Thorium
☐ Radon-222	☐ Strontium-	. X	otopic Uranium
Other (Specify);	☐ Nickel-63	□ Iro	
CHAIN OF CUSTODY			
1 015/2013	K. Harkness		9-6-2013
Date N	lame (Print)	W Var Vuo	Date 5 0 no
Time Custody Received O	rganization	Stohatore	Time Custody Released
2.			
Date N	ame (Print)		Date
Time Custody Received O	rganization	Signature	Time Custody Released
3. 9-11-13	JA VA		
Date N	lame (Print)	191	Date Date
Time Custody Received O	Prganization	-Signature	Time Custody Released
	rest in some promise and action in the rest in the some and the some and the some size of the some in the some		
LABORATORY REMARKS (L. A. Condition at Time of Receip			
Acceptable	Broken Container	Leaked in Transit	☐ Improper Container
 Holding Time Exceeded 	☐ Sample Not Cooled	Insufficient Sample	The state of the s
B. Preservatives/Carriers:	autoropelinakoan liikalahan etaila (kili	ACCOMPANIES OF STATES	



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0690

Investigator: Kathleen Harkness

RHB

Requestor: Roger Lupo

RHB

500 S. Kraemer # 235,

CA

CDPH - RHB, 1500 Capitol Av., MS 7610

92821

Sacramento

95814-5006

Phone Number: 714 524-1816

Phone Number: 916-440-7955

System No:

K-40

Site/Project Name: San Onofre NPP / Beach Sand / Control #4 Newport Beach Billing Agency: RHB

Samples Received by Lab: 9/11/2013

Units Parameter Method Result +/- CE MDA 95 14:30 Sampling Point: Sediment R 91825 Time Collected: 9/5/2013 Lab No: 13-0690-01 Sample ID: Sample Type: Soil/Sediment 0.9837 Dry Wt/Wet Wt 0.291 pCi/g dry wt HASL Ga-01-R 16.2 +/- 0.361

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	REQUEST FO	R SAMPLE ANALYS	IS (Radiochemical)	
Sanitation and Radiation 850 Marina Bay Parkway,			Pate Received	Lab No. (Leave Blank)
Richmond, CA 94804				15-0070
510-620-2911			te & Time Sampled	Serial Number
			2013- 1950	R 91825
Collector Information			Information	and the second
Name: Dept./Branch:	ii kness	Name: Dept./Brai	nch: Rigger Lu	
Dept./Branch. Address: 유비승	LINESS - BASA	Address:		e contento, CA
Telephone No.: 🔭 । प्	594 1516	Peterhone	e No.:////////////////////////////////////	· - / / 35
Sample Information	SONES SEDIM	ENT Billing Ag		
System Name / Facility: ~ Sampling Point (s):	Beach Said Ba	DWF0	B() 🖫 RHB 🛄 I B 🗀 FDB 🛄 I	RWQCB() DTSC DWR DCDFG
	NB4	each EMB		cify)
System No.: たるこ	<u> </u>		<u> </u>	
TYPE OF SAMPLE (Check	call applicable boxes)			
☐ Drinking Water	☐ Groundwater	☐ Surface	e Water ution System	☐ Wastewater
☐ Raw				
☐ Treated (circle one): C	hlorinated / Chloraminated /	Chlorine Dioxide / Ozon	ated / Peroxizone / Fluori	dated / Coagulated / pH Adjusted
Air Filters	Date/Time	∄ Seawa	ter	☐ Sludge (Semi-solid Samples)
Finishing:		Milk		Soil/Sediment
		— Ţ ······· ☐ Wipes		☐ Biota (Type):
Net (M³)		ur Radon	Canister	Other:
Air Charcoal Cartridge				and the second s
COMMENTS: (Cautions, e	etc.):	V V	Section 1. The section of the sectio	<u>andronia de la compania del compania de la compania del compania de la compania del compania de la compania de la compania de la compania del compania de la compania dela compania del co</u>
	servatives added:	lced/Froze	en: Ot	her:
Field Measurement:	mR	/hr 🔲 Radion	uclide(s), if known:	
	e prearranged and have supe			
NALYSIS REQUESTED	(For questions, please call 5	10-620-2911)		
Gross Alpha 🧳		Gross Beta	≸ Gamma So	can
Total Uranium		Total Beta (NGC)	NORM (Ga	
1 Total Radium		Tritium (³ H)		nericium / Curium
Radium-226		Carbon-14	☐ Isotopic PI	
Radium-228		lodine-131	☐ Isotopic Th	
Radon-222		Strontium-89, 90	☐ Isotopic Ur	
Other (Specify);			☐ Iron-55	
CHAIN OF CUSTODY				
يستس السابقات والا	A Hakness			9/6/2013
Date 14.30	Name (Print)		2. 1	Date
Time Custody Received	Organization A C C	Signature	MKO-FILLKING	Time Custody Released
				Time Costoff (Velegator)
Date	Name (Print)			Date
Time Custody Received	Organization #	Signature		Time Custody Released
9-11-13	VA			Tano Odelouy Neleaseu
Date 14:00	Name (Print)	, 0	Victorio M.C	Date Date
Time Custody Received	Organization	Signature	CMOORGE III.C	Time Custody Released
APOPANOPYPENARY	Valence (Sleves)			
ABORATORY REMARKS . Condition at Time of Re				
☐ Acceptable	☐ Broken Contail		ed in Transit	☐ Improper Container
O Holding Time Excee	ded 🔲 Sample Not Co	oled . Insuff	icient Sample	
Preservatives/Carriers:				
Added While Sampli	ng 💹 🖸 Added in Labo	ratory 🚺 Not A	dded	☐ Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0717

Investigator: K. HARKNESS

RHB

Requestor: Roger Lupo

RHB

1800 E. LAMBERT, STE 125 **BREA**

CA

CDPH - RHB, 1500 Capitol Av., MS 7610

CA 95814-5006

Phone Number: 714-257-2041

Sample ID:

Sacramento

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / REMP Soils

System No:

Billing Agency: RHB

Samples Received by Lab: 9/24/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0717-01

Sample Type: Soil/Sediment

0.994

Time Collected: 9/18/2013 12:40

Sampling Point: #7, Control

Oceanside

Dry Wt/Wet Wt

K-40

HASL Ga-01-R

R 91821

3.43 +/- 0.107

0.255



⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	EST FOR SAMPLE AN			
Sanitation and Radiation Laboratories Bran	ch	Date Receive		Lab No. (Leave Blank)
850 Marina Bay Parkway, G164 Richmond, CA 94804		9-24-12		13-0717
510-620-2911		Date & Time San	•	Serial Number
	- 4		240	R 91821
Collector Information		porting Information	1 .	100
Dent /Branch:	. 11.10	pt./Branch: KQ	SOC LL	To AU
Address: KHO-IC	E Add	dress:	KHW-	and have a state of the property of the property of the second section of the second s
(13H	10/1/2 Tal	Na. 9	11 440	0-7995
Operate Information		lephone No.: 4	14 /1	, , ,
System Name / Facility: 50N65	DEWE		RHB RV	VQCB() DTSC
	=7-Control 10	DWTPB 🗀	FDB D DV	VR CDFG
		EMB 🔾	Other (Specify) <u></u>
System No.: PAIACO of Poace.	Abbey Uside	- CA		
TYPE OF SAMPLE (Check all applicable boxe				***
☐ Drinking Water ☐ Groundwa ☐ Raw ☐ Water Tre	ater eatment Plant (WTP)	Surface Water Distribution System		Wastewater Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloram			c .	
				
☐ Air Filters Da		Seawater		Sludge (Semi-solid Samples)
Finishing:		Milk	3	Soil/Sediment
Starting:		Wipes		Biota (Type):
Net (M ³)		Radon Canister		Other:
☐ Air Charcoal Cartridge				e de la companya de l
	The second secon			langkaranna an ann an deal agus an
COMMENTS: (Cautions, etc.):	loo		Otho	
Field Treatment: Preservatives added: _	ICE			
☐ Field Measurement:	mR/hr u r		known:	
Rush/Priority (should be prearranged and h	lave supervisory approval)		
ANALYSIS REQUESTED (For questions, plea				
☐ Gross Alpha	☐ Gross Beta		Camma Scal	
☐ Total Uranium	☐ Total Beta (LS	•	NORM (Gam	The state of the s
☐ Total Radium	☐ Tritium (³ H)		•	ricium / Curium
☐ Radium-226	☐ Carbon-14		Isotopic Pluto	
☐ Radium-228	☐ lodine-131		Isotopic Thor	
☐ Radon-222	☐ Strontium-89,	90 🗆	l Isotopic Urar	ium
Other (Specify);	☐ Nickel-63		l Iron-55	
CHAIN OF CUSTODY	1			01:01:0
1. 9/18/13 1' XHar	Knes	6/11		7/17/13
Dafe' 1240 Nam'e (Print)	ICE C	X Hnikh	020	Late Lom mail
Time Custody Received Organization	Sig	nature		Time Custody Released
2. Nome (Print)				Date
Date Name (Print)				<u> Paragonal de la companya del companya del companya de la company</u>
Time Custody Received Organization	Sig	gnature		Time Custody Released
3. Pate Pate Name (Print)		_		Date
14.00	IRIR	() w	Tmo MI (L
Time Custody Received Organization	Sign Sign	gnature U JU	CAT CIC VIOL	Time Custody Released
LABORATORY REMARKS (Leave Blank)				
A. Condition at Time of Receipt:	$\subseteq 0.0$	WE/HK		
	ken Container Donale Not Cooled	Leaked in Transit		Improper Container
	nple Not Cooled	Insufficient Sample		
B. Preservatives/Carriers:	ed in Lahoratory			D Not Applicable:



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0718

Investigator: K. HARKNESS

RHB

Requestor: Roger Lupo

RHB

1800 E. LAMBERT, STE 125

CA

CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento

BREA

92821

CA

95814-5006

Phone Number: 714-257-2041

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / REMP Soil

System No:

Billing Agency: RHB

Samples Received by Lab: 9/24/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0718-01

Sample Type: Soil/Sediment

Sample ID:

R 91827

Time Collected: 9/18/2013 11:20

1.000

Sampling Point: #1, Camp San

Onofre

Dry Wt/Wet Wt

K-40

HASL Ga-01-R

22.6 +/- 0.506

0.298



⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

	AMPLE ANALYSIS (Radiochem	
Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164	Date Received	Lab No. (Leave Blank)
Richmond, CA 94804	9-24-13	13-0318
510-620-2911	Date & Time Sample	
	11100012	120 R 91827
Collector Information Name: KHauknes	Reporting Information Name:	Dannlupp
Dept./Branch:	Dept./Branch:	* OSCI CUP
Address: RH B-1	Address:	Roger Lupo LHB. RAU
Telephone No.: 714 524-1816	Telephone No.:	(916) 440-7955
Sample Information	Billing Agency	
	D DWFOB() Q RH	HB □ RWQCB() □ DTSC
Sampling Point (s): SOILS #	D DWTPB D FD	B D DWR D CDFG
System No .: Camp San Onofr	e □ EMB □ Ott	her (Specify)
TYPE OF SAMPLE (Check all applicable boxes)		
☐ Drinking Water ☐ Groundwater	Surface Water	☐ Wastewater
☐ Raw ☐ Water Treatment Plant	(WTP) Distribution System	☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlor	ine Dioxide / Ozonated / Peroxizon	e / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	☐ Seawater	☐ Sludge (Semi-solid Samples)
Finishing:	☐ Milk	Soil/Sediment
Starting:	☐ Wipes	Biota (Type):
Net (M°)	☐ Radon Canister	Other:
Air Charcoal Cartridge		
COMMENTS: (Cautions, etc.):	<u> </u>	
☐ Field Treatment: Preservatives added:	Iced/Frozen:	Other:
☐ Field Measurement:mR/hr	☐ Radionuclide(s), if know	one production of the second o
☐ Rush/Priority (should be prearranged and have supervisor		
ANALYSIS REQUESTED (For questions, please call 510-62		
		amma Scan
		ORM (Gamma)
		otopic Americium / Curium
		otopic Plutonium
		otopic Thorium
		otopic Uranium
Other (Specify); Nic	ckel-63 🚨 Iro	yn-55
t. 9/18/13 K HARKNESS		911912013
Date Name (Print)	- NH - 121010	Date
1120 RHR-ICE	- Milareness	50 mAI
Time Custody Received Organization 2.	Signature	Time Custody Released
Date Name (Print)		Date
Time Custody Received Organization 3. Q_Q(I)-13	Signature	Time Custody Released
Date Name (Print)	191	M. Date
19(1)0		onall-ali
Time Custody Received Organization	Signature	Time Custody Released
LABORATORY REMARKS (Leave Blank)	DO MELYR	
A. Condition at Time of Receipt: Acceptable Broken Container		
☐ Holding Time Exceeded ☐ Sample Not Cooled	Leaked in Transit Insufficient Sample	☐ Improper Container
B. Preservatives/Carriers:		
☐ Added While Sampling ☐ Added in Laboratory	Not Added	Not Applicable

☐ Not Added

□ Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0720

Investigator: K. HARKNESS

RHB

Requestor: Roger Lupo

RHB

1800 E. LAMBERT, STE 125 BREA

CA 92821 CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento

CA 95814-5006

Phone Number: 714-257-2041

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP

System No:

K-40

Billing Agency: RHB

HASL Ga-01-R

Samples Received by Lab: 9/24/2013

0.237

pCi/g dry wt

Parameter Method Result +/- CE MDA 95 **Units** Lab No: 13-0720-01 Sample ID: R 91829 Time Collected: 9/18/2013 11:00 Sampling Point: #3, Basilone Rd. Camp Pendleton Sample Type: Soil/Sediment Dry Wt/Wet Wt 0.999

18.7 +/- 0.418



Task ID: 13-0720

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

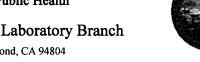
⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FUR SA	AMPLE ANALYSIS (Radiochemical)
Sanitation and Radiation Laboratories Branch	Date Received Lab No. (Leave Blank)
850 Marina Bay Parkway, G164 Richmond, CA 94804	9-24-13 13-0720
510-620-2911	Date & Time Sampled Serial Number
	9/18/13 1100 R 91829
Collector Information K.Harkness	Reporting Information
	Name: Dept./Branch: Address: Reporting information ROSE LUPO RHB- RAU
Dept./Branch: RHB-ICE	Address: RHB-RAU
(dd, 000.	
Telephone No.: (714)524 - 1816	
Sample Information System Name / Facility: 50N65 REMP	Billing Agency
System Name / Facility: 00/165 RETTI	D DWFOB() DYRHB D RWQCB() D DTSC D DWTPB D FDB D DWR D CDFG
= 1 0 ()	D 5140
System No.: Pasilone Rd - Sendle to	מס
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater	☐ Surface Water ☐ Wastewater
· · · · · · · · · · · · · · · · · · ·	(WTP) Distribution System Point of Use (POU)
Treated (circle one): Chlorinated / Chloraminated / Chlor	rine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjust
Air Filters Date/Time	☐ Seawater ☐ Sludge (Semi-solid Samples
Finishing:	☐ Milk ☐ Soil/Sediment
Starting:	☐ Wipes ☐ Biota (Type):
Net (M³)	☐ Radon Canister ☐ Other:
Air Charcoal Cartridge	d Nadoli Callistei
All Charcoar Cartinge	
COMMENTS: (Cautions, etc.):	and the state of the second state of the second of the
Field Treatment: Preservatives added:	Iced/Frozen: Other:
	☐ Radionuclide(s), if known:
Rush/Priority (should be prearranged and have superviso	
ANALYSIS REQUESTED (For questions, please call 510-62	20-2011)
	oss Beta (LSC) Gamma Scan tal Beta (LSC) D NORM (Gamma)
	rbon-14
Other (Specify);	ckel-63 ☐ Iron-55
CHAIN OF CUSTODY	9/19/12
Date Name (Print)	
LION KHB-ICE	4 Markness 44pm mil
Tirné Custody Received Organization	Signature Time Cilistody Released
Date Name (Print)	Date
Time Custody Received Organization	Signature Time Custody Released
Date Name (Print)	Date Date
14:00 Dunie	3 / Tulorial all
Time Custody Received Organization	Signature Time Custody Released
ABORATORY REMARKS (Leave Blank)	0.01 UL/HR
. Condition at Time of Receipt:	
☐ Acceptable ☐ Broken Container ☐ Holding Time Exceeded ☐ Sample Not Cooled	☐ Leaked in Transit ☐ Improper Container ☐ Insufficient Sample
\mathbf{x}_{i}	
. Preservatives/Carriers:	
Added While Sampling Added in Laboratory	□ Not Added □ Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0719

Investigator: K. HARKNESS

RHB

Requestor: Roger Lupo

RHB

1800 E. LAMBERT, STE 125

CA 92821 CDPH - RHB, 1500 Capitol Av., MS 7610 95814-5006

Phone Number: 714-257-2041

Sacramento CA Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / REMP Soil

System No:

Billing Agency: RHB

Samples Received by Lab: 9/24/2013

Parameter	Method	Result +/- CE		MDA 95	Units
Lab No: 13-0719-01	Sample ID: R 91828 Sample Type: Soil/Sediment	Time Collected: 9/18/2013	10:20	Sampling Point:	#2, Old Rte 101 Campl Pendleton
Dry Wt/Wet Wt		1.000			
K-40	HASL Ga-01-R	9.23 +/- 0.204	4	0.139	pCi/g dry wt



Task ID: 13-0719

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMPLE	ANAL 1313 (Radiocrieffical)
Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164	Date Received Lab No. (Leave Blank) 9-24-13 13-0719
Richmond, CA 94804 510-620-2911	Date & Time Sampled Serial Number 9/18/13 1020 R 91828
Collector Information Name: Dept./Branch: Address: RHB-ICE	Reporting Information Name: ROSE CLUPO Dept./Branch: RHB-RAU Telephone No.: (916) 440-7955
Telephone No.: (714) 524-1816 Sample Information System Name / Facility: SON 65 REMP Sampling Point (s): SOILS # Z System No.: Old Rte 101 in Pendleton	Telephone No.: (9/6) 470-773 Billing Agency DWFOB() PRHB RWQCB() DTSC DWTPB DFDB DWR DCFG EMB Other (Specify)
☐ Raw ☐ Water Treatment Plant (WTP)	Surface Water Distribution System Distribution
☐ Air Filters Date/Time	☐ Seawater ☐ Sludge (Semi-solid Samples)
Finishing:	☐ Milk Soil/Sediment
Starting:	☐ Wipes ☐ Biota (Type):
Net (M³)	☐ Radon Canister ☐ Other:
☐ Air Charcoal Cartridge	
COMMENTS: (Cautions, etc.): Field Treatment: Preservatives added:mR/hr Rush/Priority (should be prearranged and have supervisory appr	lced/Frozen: Other:
ANALYSIS REQUESTED (For questions, please call 510-620-2911	
Gross Alpha	
☐ Total Uranium ☐ Total Beta	
☐ Total Radium ☐ Tritium (³H	
☐ Radium-226 ☐ Carbon-14	☐ Isotopic Plutonium
□ Radium-228 □ lodine-131	and the control of th
☐ Radon-222 ☐ Strontium-	
☐ Other (Specify); ☐ Nickel-63	☐ Iron-55
CHAIN OF CUSTODY 1. 9/8/3 Date Time Custody Received 2. Date Name (Print) Organization Name (Print)	Signature A Houkness 9/19/2013 Date 9/19/2013 Time Oustody Released Date
Time Custody Received Organization	Signature Time Custody Released
3. 7-24-13 Name (Print) DURLB Time Custody Received Organization	Signature Date Time Custody Released
LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt:	☐ Leaked in Transit ☐ Improper Container ☐ Insufficient Sample



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0716

Investigator: K. HARKNESS

RHB

Requestor: Roger Lupo

RHB

1800 E. LAMBERT, STE 125

CA

CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento

95814-5006 CA

Phone Number: 714-257-2041

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / REMP Soils

System No:

Billing Agency: RHB

Samples Received by Lab: 9/24/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0716-01

R 91820

HASL Ga-01-R

Sampling Point: #5, Near old

Sample ID: Sample Type: Soil/Sediment Time Collected: 9/18/2013 09:30

visitors center

Dry Wt/Wet Wt

K-40

1.000

14.9 +/- 0.336

0.277



⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMPLE	ANALYSIS (Radiochemical)	
Sanitation and Radiation Laboratories Branch	Date Received	Lab No. (Leave Blank)
850 Marina Bay Parkway, G164 Richmond, CA 94804	9-24-13	15-7716 1 /
510-620-2911	Date & Time Sampled	Serial Number
	9/18/13 0930	R 91820
Name: HARKNESS	Reporting Information	
Don't Manuals	Name: Rose Lupo Dept./Branch: RHB-RAU	1
Address: RHB-TCE	Address: RHB-RA	人
(AUI)11 101/	611 1110	7065
Telephone No.: (714)524-18/6	Telephone No.: (916) 440-	1700
Sample Information System Name / Facility: 50 N65 REMP	Billing Agency D DWFOB() DXRHB D RWQ0	ND () D DT00
Sampling Point (s): SOILS # 5	D DWFOB() SKRHB D RWQC D DWTPB D FDB D DWR	CB() DTSC DCDFG
30103	☐ EMB ☐ Other (Specify)	
System No.: Near OH Visitors Center		
TYPE OF SAMPLE (Check all applicable boxes)		
☐ Drinking Water ☐ Groundwater ☐ Water Treatment Plant (WTP)	☐ Surface Water ☐ Wa	stewater nt of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Diox	the contract of the contract o	
☐ Air Filters Date/Time		dge (Semi-solid Samples)
Finishing:	☐ Milk ☐KSoi	I/Sediment
Starting:	☐ Wipes ☐ Bio	ta (Type):
Net (M ³)	☐ Radon Canister ☐ Oth	er:
☐ Air Charcoal Cartridge		
COMMENTS: (Cautions, etc.):		
the state of the s	lced/Frozen: Other:	the second of th
Rush/Priority (should be prearranged and have supervisory appro	Radionuclide(s), if known:	
	· · · · · · · · · · · · · · · · · · ·	
ANALYSIS REQUESTED (For questions, please call 510-620-2911)		
☐ Gross Alpha ☐ Gross Beta	7	
☐ Total Uranium ☐ Total Beta		
☐ Total Radium ☐ Tritium (³H)		
☐ Radium-226 ☐ Carbon-14		n
☐ Radium-228 ☐ lodine-131	☐ Isotopic Thorium	
☐ Radon-222 ☐ Strontium-8		
Other (Specify); Nickel-63	☐ Iron-55	
1. GIRLIS 030 KHARKNESS		01:01:2
1. <u>Q1 X1 3 090 </u>	A Zijir in dirika di kacama	7/19/13
0930 RHA-ICE	de Hartness	44pm MAII
	TOUCK! O O	
Time Custody Received Organization	Signature	Time Custody Released
Time Custody Received Organization	Signature	
7 Time Custody Received Organization 2. Date Name (Print)		Date
Time Custody Received Organization 2.	Signature	
7 Time Custody Received Organization Date Name (Print) Time Custody Received Organization 3. Date Name (Print)		Date
7 Time Custody Received Organization Date Name (Print) Time Custody Received Organization 3. P-2U-13 Date Name (Print) Name (Print)	Signature Ultria Melli	Date Time Custody Released Date
7. Time Custody Received Organization Date Name (Print) Time Custody Received Organization 3. Date Name (Print) Name (Print) Time Custody Received Organization Organization	Signature Signature	Date Time Custody Released
7. Time Custody Received Organization Date Name (Print) Time Custody Received Organization 3. Date Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization Name (Print) Organization	Signature Ultria Melli	Date Time Custody Released Date
Time Custody Received Organization 2. Date Name (Print) Time Custody Received Organization 3. Date Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt:	Signature Signature 20/MF/HR	Date Time Custody Released Date Time Custody Released
Time Custody Received Organization 2. Date Name (Print) Time Custody Received Organization 3. Date Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization Name (Print) Organization LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt:	Signature Signature	Date Time Custody Released Date
Time Custody Received Organization 2. Date Name (Print) Time Custody Received Organization 3. Date Name (Print) Time Custody Received Organization Name (Print) Time Custody Received Organization Name (Print) Organization LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt:	Signature Signature 20/MF/HR	Date Time Custody Released Date Time Custody Released



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0689

Requestor: Roger Lupo

RHB

CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / Beach Sand #3, Trail #6

Phone Number: 714 524-1816

500 S. Kraemer # 235,

Investigator: Kathleen Harkness

System No: Billing Agency: RHB

RHB

92821

Samples Received by Lab: 9/11/2013

Task ID: 13-0689

Result +/- CE Units Method MDA 95 **Parameter** Lab No: 13-0689-01 R 91823 Time Collected: 9/5/2013 16:45 Sampling Point: Sediment Sample ID: Sample Type: Soil/Sediment 0.911 Dry Wt/Wet Wt K-40 HASL Ga-01-R 2.06 +/- 0.0745 0.223 pCi/g dry wt

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Telephone No.: /7/4) 524-18/6 Sample Information System Name / Facility: SON65 SEDIMENT Sampling Point (s): Beach Sand System No.: #3 — Trail #4- TYPE OF SAMPLE (Check all applicable boxes) Drinking Water Groundwater Water Treatment Plant (WTP)	Date Received Lab No. (Leave Blank) 9-1-3
Finishing: Starting:	□ Seawater □ Sludge (Semi-solid Samples) □ Milk □ Soil/Sediment □ Wipes □ Biota (Type): □ Radon Canister □ Other:
	Ced/Frozen: Other: Othe
☐ Gross Alpha ☐ Total Uranium ☐ Total Radium ☐ Total Radium ☐ Radium-226 ☐ Radium-228 ☐ Radon-222 ☐ Other (Specify); ☐ Nickel-63	Gamma Scan LSC) NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium
CHAIN OF CUSTODY 1. 95/2013	String Custody Released Date Date
Time Custody Received Organization Organization Name (Print) Time Custody Received Organization Organization	Signature Time Custody Released Date Time Custody Released
LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: Acceptable Holding Time Exceeded Sample Not Cooled B. Preservatives/Carriers: Added While Sampling Added in Laboratory	Leaked in Transit I Improper Container Insufficient Sample Not Added I Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0329

Investigator: J M S

DC REM

Requestor: Roger Lupo

RHB

San Louis Obisp

CDPH - RHB, 1500 Capitol Av., MS 7610

Sacramento

95814-5006

Phone Number:

CA

Site/Project Name: San Onofre NPP / Sediment / 2nd Qtr 2013

Phone Number: 916-440-7955

System No:

Billing Agency: RHB

Samples Received by Lab: 4/25/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0329-01

Sample Type: Soil/Sediment

Sample ID:

R 96278

Time Collected: 4/23/2013 15:08

Sampling Point: San Onofre F

Dry Wt/Wet Wt

0.787

K-40

HASL Ga-01-R

14.0 +/- 0.308

0.272



⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

13:30

4,74,73

Department of Public Health

	QUEST FUR SAMPLE			
Drinking Water and Radiation Laborato 850 Marina Bay Parkway, G164 Richmond, CA 94804	- ⁷ 4	Date Received	.13	ab No (Jeane Blank)
510-620-2911		Date & Time Sa 4-23-13	15:06	R 96278
Collector Information		Reporting Information		3-14
Name: Dept./Branch: Address:	Fr 5	Name: Dept./Branch: Address:		
Telephone No.:		Telephone No.:		
Sample Information System Name / Facility: Sampling Point (s): Sampling Point (s):	fie F	D DWTPB C	RHB RWQC FDB DWR Other (Specify)	☐ CDFG
System No.:		C LIVID	Other (opecity)	
TYPE OF SAMPLE (Check all applicable I				. نو مدیر
□ Drinking Water □ Grou □ Raw □ Wate □ Treated (circle one): Chlorinated / Chlorinated	er Treatment Plant (WTP)	_		tewater it of Use (POU) Coagulated / pH Adjusted
☐ Air Filters	Date/Time	☐ Seawater	☐ Sluc	ge (Semi-solid Samples)
Finishing:		☐ Milk	Soil/	Sediment
Starting:		■ Wipes	🔲 Biot	a (Type):
Net (M ³)		□ Radon Canister	☐ Othe	er:
☐ Air Charcoal Cartridge			·····	
COMMENTS: (Cautions, etc.):			· · · · · · · · · · · · · · · · · · ·	na tanàna ao ao
☐ Field Treatment: Preservatives adde	d:	Iced/Frozen:	Other:	Marie Carlos Car
☐ Field Measurement:	mR/hr	Radionuclide(s), i	f known:	
☐ Rush/Priority (should be prearranged a	nd have supervisory appro	val)		
ANALYSIS REQUESTED (For questions,	please call 510-620-2911)			
☐ Gross Alpha	☐ Gross Beta	ļ .	Gamma Scan	
☐ Total Uranium	☐ Total Beta	•	NORM (Gamma)	
☐ Total Radium	☐ Tritium (³ H)	•	Isotopic Americiur	
Radium-226	☐ Carbon-14		Isotopic Plutoniun	
Radium-228	☐ lodine-131		☐ Isotopic Thorium	
Radon-222	☐ Strontium-8		Isotopic Uranium	
Other (Specify);	Nickel-63		☐ Iron-55	
CHAIN OF CUSTODY 1.				
Date Name (Print)		iii	Later and the second se	Date
Time Custody Received Organization 2.	DURLA	Signature	istoria A X h.	Time Custody Released
Date Name (Print)				Date
7 Time Custody Received Organization 3. 4-25-13	VA	Signature		Time Custody Released
Date Name (Print)		19-1	- M ML	Date
Time Custody Received Organization	DURIB	Signature	call the	Time Custody Released
LABORATORY REMARKS (Leave Blank)				
A. Condition at Time of Receipt: Acceptable Holding Time Exceeded	Broken Container Sample Not Cooled	☐ Leaked in Transit☐ Insufficient Sample		Improper Container
B. Preservatives/Carriers: Added While Sampling	Added in Laboratory	□ Not Added	o.	Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0328

Investigator: J M S

DC REM

Requestor: Roger Lupo

RHB

San Louis Obisp

Sacramento

CDPH - RHB, 1500 Capitol Av., MS 7610 CA

95814-5006

Phone Number:

Site/Project Name: San Onofre NPP / 2nd Qtr 2013

Phone Number: 916-440-7955

System No:

Billing Agency: RHB

Samples Received by Lab: 4/25/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0328-01

R 96277

HASL Ga-01-R

0.816

Time Collected: 4/23/2013 13:30

Sampling Point: San Onofre B /

Sample Type: Soil/Sediment

Sample ID:

Task ID: 13-0328

Sediment

Dry Wt/Wet Wt

K-40

13.9 +/- 0.320

0.263

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

B Sed
Department of Public Health

		ANALYSIS (Radiochemical)	
850 Marina Bay Parkway,	ation Laboratory Branch G164	4-25-13	Lab No (Leave Blank)
Richmond, CA 94804 510-620-2911		Date & Time Sampled 4- 23-13 13:30	R 96277
Collector Information		Reporting Information	
Name: Dept./Branch:		Name: Dept./Branch:	
Address:	JM5	Address:	And the second s
Talankana Nia			4 <u></u>
Telephone No.: Sample Information		Telephone No.: Billing Agency	
System Name / Facility: Sampling Point (s):	Son Onofre B		
System No.:	- H alicable bases)		
TYPE OF SAMPLE (Check Drinking Water		Ch Confess Water	141
Raw	☐ Groundwater ☐ Water Treatment Plant (WTP) hlorinated / Chloraminated / Chlorine Diox	☐ Distribution System ☐	Wastewater Point of Use (POU) ed / Coagulated / pH Adjusted
☐ Air Filters	Date/Time	☐ Seawater ☐	Sludge (Semi-solid Samples)
Finishing:			Soil/Sediment .
O			Biota (Type): Sodimen
Net (M ³)			Other:
☐ Air Charcoal Cartridge			
COMMENTS: (Cautions, e	etc.):		
	servatives added:		•
No. 1		□ Radionuclide(s), if known:	
	e prearranged and have supervisory appro		
ANALYSIS REQUESTED ((For questions, please call 510-620-2911)		
☐ Gross Alpha	☐ Gross Beta		· •
☐ Total Uranium	☐ Total Beta	NA	
☐ Total Radium	☐ Tritium (³H		•
☐ Radium-226	☐ Carbon-14	•	
☐ Radium-228	☐ lodine-131	☐ Isotopic Thori	
☐ Radon-222	☐ Strontium-	•	
Other (Specify);	□ Nickel-63	☐ Iron-55	
CHAIN OF CUSTODY			
1. Date	Name (Print)		Date
Time Custody Received	Organization	Signature	Time Custody Released
2. Date	Name (Print)		Date
Time Custody Received 3. 4-25-12	Organization \\\\A	Signature	Time Custody Released
Date	Name (Print)	19	Date
Time Custody Received	Organization DWRLP	Signature Subman, Il	Time Custody Released
LABORATORY REMARKS	(Leave Blank)		
A. Condition at Time of Rec Acceptable Holding Time Exceed	celpt: Broken Container	Leaked in Transit Insufficient Sample	☐ Improper Container
B. Preservatives/Carriers: Added While Sampling	ng 🔾 Added in Laboratory	□ Not Added	□ Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0331

Investigator: J M S

DC REM

Requestor: Roger Lupo

RHB

San Louis Obisp CA Sacramento

CDPH - RHB, 1500 Capitol Av., MS 7610

CA 95814-5006

Phone Number:

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / 2nd Qtr 2013

System No:

Billing Agency: RHB

Samples Received by Lab: 4/25/2013

Units

Parameter

Method

Sample Type: Soil/Sediment

Result +/- CE

MDA 95

Lab No: 13-0331-01

Sample ID:

R 96280

Time Collected: 4/23/2013 12:45

0.802

Sampling Point: San Onofre D /

Sediment

Dry Wt/Wet Wt

K-40

HASL Ga-01-R

16.3 +/- 0.367

0.353

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity, in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.



Drinking Water and Radiat		Date Received	Lab No. (Leave Blank)
850 Marina Bay Parkway, G		4743-12	3-0331
Richmond, CA 94804 510-620-2911		Date & Time Sampled	R 96280
	<u> </u>	30 1 3	11 30200
Collector Information		Reporting Information Name:	
lame: Dept./Branch:		Dept./Branch:	
Address:	IMS	Address:	
	4 10 m	Telephone No.:	
Telephone No.: Sample Information		Billing Agency	
System Name / Facility: Sampling Point (s):	San Duroque D	DWFOB() RHB RWQC DWTPB FDB DWR EMB Other (Specify)	☐ CDFG
System No.:			:
TYPE OF SAMPLE (Check	all applicable boxes)		
Drinking Water Raw Tracted (circle one): Ch	☐ Groundwater ☐ Water Treatment Plant (WTP	— Carrace 110.0	istewater int of Use (POU) / Coagulated / pH Adjusted
I freated (dige one). On			
Air Filters	Date/Time		idge (Semi-solid Samples)
			il/Sediment
			ta (Type):
Net (M ³)		☐ Radon Canister ☐ Oth	ner:
Air Charcoal Cartridge			
OMMENTS: (Cautions, et	tc.):	12 1	
Field Treatment: Pres	servatives added:	lced/Frozen:Other: _	
Field Measurement:	mR/hr	☐ Radionuclide(s), if known:	
Rush/Priority (should be	prearranged and have supervisory ap		1
	For questions, please call 510-620-291		
	Gross B		
☐ Gross Alpha ☐ Total Uranium	☐ Total Be)
	☐ Tritium (
Total Radium	☐ Carbon-		
Radium-226	lodine-1		
Radium-228		m-89, 90	i
Radon-222	☐ Nickel-6		
Other (Specify):	- Honor o		
CHAIN OF CUSTODY			
Date	Name (Print)		Date
Time Custody Received	Organization	Signature	Time Custody Released
2. Date	Name (Print)		Date
Time Custody Received 3.	Organization I/A	Signature	Time Custody Released
Date -	Name (Print)	19 7 - 11/01	Date
Time Custody Received	Organization	Signature Signature	Time Custody Released
LABORATORY REMARKS A. Condition at Time of Re			
☐ Acceptable	☐ Broken Container	☐ Leaked in Transit ☐ ☐ Insufficient Sample	Improper Container
☐ Holding Time Exceed	ded Sample Not Cooled	a maunicient dampie	
B. Preservatives/Carriers:Added While Sampling	ing Added in Laboratory	☐ Not Added. □	Not Applicable
A Vacco tatule certibu	118	dagan permanan baharan bermatan baharan bermatan baharan baharan baharan baharan baharan baharan baharan bahar	



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0330

Investigator: J M S

DC REM

Requestor: Roger Lupo

RHB

San Louis Obisp

CDPH - RHB, 1500 Capitol Av., MS 7610

Sacramento

95814-5006

Phone Number:

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / 2nd Qtr 2013

System No:

Billing Agency: RHB

Samples Received by Lab: 4/25/2013

CA

Task ID: 13-0330

Parameter	Method	Result +/- CE		MDA 95	Units
Lab No: 13-0330-01	Sample ID: R 96279 Sample Type: Soil/Sediment	Time Collected: 4/23/2013	12:10	Sampling Point:	San Onofre C / Sediment
Dry Wt/Wet Wt		0.783			
K-40	HASL Ga-01-R	13.6 +/- 0.310)	0.261	pCi/g dry wt

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.



		ANALYSIS (Radiochemical)	
Drinking Water and Radia 850 Marina Bay Parkway, G Richmond, CA 94804 510-620-2911		Date & Time Sample's	Serial Number R 96279
Collector Information Name: Dept./Branch: Address:	SMS	Reporting Information Name: Dept./Branch: Address:	1
Telephone No.: Sample Information System Name / Facility: Sampling Point (s): System No.:	San Duolie e	D DWTPB D FDB	RWQCB() DTSC DWR DCDFG ecify)
TYPE OF SAMPLE (Check and Drinking Water Raw	☐ Groundwater	☐ Distribution System	☐ Wastewater ☐ Point of Use (POU) ridated / Coagulated / pH Adjusted
☐ Air Filters Finishing: Starting: Net (M³) ☐ Air Charcoal Cartridge	Date/Time	☐ Seawater ☐ Milk ☐ Wipes ☐ Radon Canister	☐ Sludge (Semi-solid Samples) ☐ Soil/Sediment ☐ Biota (Type):
☐ Field Treatment: Prese ☐ Field Measurement: ☐ Rush/Priority (should be	prearranged and have supervisory appro	lced/Frozen: O Radionuclide(s), if known: oval)	
ANALYSIS REQUESTED (F Gross Alpha Total Uranium Total Radium Radium-226 Radium-228 Radon-222 Other (Specify);	For questions, please call 510-620-2911) Gross Beta Total Beta Tritium (³H) Carbon-14 Iodine-131 Strontium-8	Gamma S (LSC)	Gamma) Americium / Curium Plutonium Thorium
CHAIN OF CUSTODY 1. Date Time Custody Received 2. Date Time Custody Received 3. Date 10.30 Time Custody Received	Name (Print) Organization Name (Print) Organization VA Name,(Print) Organization	Signature Signature Signature	Date Time Custody Released Date Time Custody Released Date Time Custody Released Time Custody Released
LABORATORY REMARKS A. Condition at Time of Rece	eipt: Broken Container ed Sample Not Cooled	□ Leaked in Transit □ Insufficient Sample □ Not Added	☐ Improper Container Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0270

Investigator: RHM

RHB

Requestor: Roger Lupo

RHB

SAN ONOFRE Phone Number:

CA

CDPH - RHB, 1500 Capitol Av., MS 7610

95814-5006

Sacramento

CA

Phone Number: 916-440-7955

Task ID: 13-0270

Site/Project Name: San Onofre NPP / 2nd Qtr 2013

System No:

Billing Agency: RHB

Samples Received by Lab: 4/16/2013

Parameter Method Result +/- CE MDA 95 Units R 92397 Time Collected: 4/11/2013 08:50 Sampling Point: Sediment Lab No: 13-0270-01 Sample ID: Sample Type: Soil/Sediment Dry Wt/Wet Wt 0.762 K-40 HASL Ga-01-R 17.8 +/- 0.396 0.235 pCi/g dry wt

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMPLE		100000000000000000000000000000000000000
Sanitation and Radiation Laboratories Branch	Date Received Lab No. (Leave Blank)	
850 Marina Bay Parkway, G164	4-16-13 13-0220	
Richmond, CA 94804 510-620-2911	Date & Time Sampled \$250gm Serial Number	
	4-11-13 10-31 R 92397	
Collector Information	Reporting Information	
Name: Dept./Branch:	Name: Dept./Branch:	
Address:	IAddress:	7.
l'Address.		
Telephone No.:	Telephone No.:	\Box
Sample Information	Billing Agency	
System Name / Facility: San Oudie	D DWFOB() D RHB D RWQCB() D DTSC	
Sampling Form (5).	DWTPB FDB DWR CDFG EMB Other (Specify)	L.
System No.:	C EMB C Otter (Specily)	1/3
TYPE OF SAMPLE (Check all applicable boxes)		
☐ Drinking Water ☐ Groundwater	☐ Surface Water ☐ Wastewater	
Raw Water Treatment Plant (WTP)		e e e
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Diox	dde / Ozonated / Peroxizone / Fluoridated / Coagulated / pri Adjust	ted
☐ Air Filters Date/Time	☐ Seawater ☐ Sludge (Semi-solid Sample:	s)
Finishing:	☐ Milk ☐ Soil/Sediment	7.
Starting:	☐ Wipes ☐ Biota (Type):	
Net (M ³)		ī
	Radon Canister Other: <u>Sedument</u>	
Air Charcoal Cartridge		
COMMENTS: (Cautions, etc.):		
☐ Field Treatment: Preservatives added:	Iced/Frozen: Other:	
	☐ Radionuclide(s), if known:	
	, i servicini in imiel a kinami	
☐ Rush/Priority (should be prearranged and have supervisory appro	oval)	
	oval)	
□ Rush/Priority (should be prearranged and have supervisory approached ANALYSIS REQUESTED (For questions, please call 510-620-2911) □ Gross Alpha □ Gross Beta	oval)) a	
□ Rush/Priority (should be prearranged and have supervisory approached and have supervisory a	oval) Gamma Scan (LSC) NORM (Gamma)	-
□ Rush/Priority (should be prearranged and have supervisory approached ANALYSIS REQUESTED (For questions, please call 510-620-2911) □ Gross Alpha □ Gross Beta	oval) Gamma Scan (LSC) NORM (Gamma)	
□ Rush/Priority (should be prearranged and have supervisory approached and have supervisory a	oval) Gamma Scan (LSC) NORM (Gamma) I sotopic Americium / Curium	
Rush/Priority (should be prearranged and have supervisory appropriate ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Tritium (³H	oval) Gamma Scan (LSC) NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium	
□ Rush/Priority (should be prearranged and have supervisory approached and have supervisory a	oval) Gamma Scan (LSC)	
□ Rush/Priority (should be prearranged and have supervisory appro ANALYSIS REQUESTED (For questions, please call 510-620-2911) □ Gross Alpha □ Gross Beta □ Total Uranium □ Total Beta □ Total Radium □ Tritium (³H □ Radium-226 □ Carbon-14 □ Radium-228 □ lodine-131	oval) Gamma Scan (LSC)	
□ Rush/Priority (should be prearranged and have supervisory appro ANALYSIS REQUESTED (For questions, please call 510-620-2911) □ Gross Alpha □ Gross Beta □ Total Uranium □ Total Beta □ Total Radium □ Tritium (³H □ Radium-226 □ Carbon-14 □ Radium-228 □ lodine-131 □ Radon-222 □ Strontium-6 □ Other (Specify); □ Nickel-63	oval) Gamma Scan (LSC)	
□ Rush/Priority (should be prearranged and have supervisory appro ANALYSIS REQUESTED (For questions, please call 510-620-2911) □ Gross Alpha □ Gross Beta □ Total Uranium □ Total Beta □ Total Radium □ Tritium (³H □ Radium-226 □ Carbon-14 □ Radium-228 □ lodine-131 □ Radon-222 □ Strontium-6 □ Other (Specify); □ Nickel-63 CHAIN OF CUSTODY 1.	oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta Total Uranium Total Radium Carbon-14 Radium-226 Radium-228 Radon-222 Strontium-6 Other (Specify); Name (Print)	oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Total Uranium Total Radium Total Radium Radium-226 Radium-228 Radon-222 Strontium-6 Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization	oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta Total Uranium Total Radium Carbon-14 Radium-226 Radium-228 Radon-222 Strontium-6 Other (Specify); Name (Print)	oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate and have supervisory appropri	oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate to the control of the cont	Oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate and have supervisory appropri	Oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate to the control of the cont	Oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate to the control of the cont	Oval) Gamma Scan (LSC)	
Rush/Priority (should be prearranged and have supervisory appropriate ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha Gross Beta Total Uranium Total Beta Total Radium Gradium-226 Carbon-14 Radium-228 Iodine-131 Radon-222 Strontium-6 Other (Specify); Nickel-63 CHAIN OF CUSTODY 1. Date Name (Print) Time Custody Received Organization 3. Date Name (Print) Time Custody Received Organization	Oval) Gamma Scan (LSC)	
□ Rush/Priority (should be prearranged and have supervisory appro ANALYSIS REQUESTED (For questions, please call 510-620-2911) □ Gross Alpha □ Gross Beta □ Total Uranium □ Total Beta □ Total Radium □ Tritium (³H □ Radium-226 □ Carbon-14 □ Radium-228 □ lodine-131 □ Radon-222 □ Strontium-0 □ Other (Specify); □ Nickel-63 CHAIN OF CUSTODY 1. □ Date □ Name (Print) □ Time Custody Received □ Organization 2. □ Date □ Name (Print) □ Time Custody Received □ Organization Aname (Print) □ Time Custody Received □ Organization LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: □ Broken Container	Gamma Scan Gam	
□ Rush/Priority (should be prearranged and have supervisory appro ANALYSIS REQUESTED (For questions, please call 510-620-2911) □ Gross Alpha □ Gross Beta □ Total Uranium □ Total Beta □ Total Radium □ Tritium (³H □ Radium-226 □ Carbon-14 □ Radium-228 □ lodine-131 □ Radon-222 □ Strontium-6 □ Other (Specify); □ Nickel-63 CHAIN OF CUSTODY 1. □ Date Name (Print) □ Time Custody Received Organization 2. □ Date Name (Print) □ Time Custody Received Organization Name (Print) □ Time Custody Received Organization Name (Print) □ Time Custody Received Organization Name (Print) □ Custody Received Organization □ Name (Print) □ Custody Received Organization	Gamma Scan (LSC) NORM (Gamma) Isotopic Americium / Curium Isotopic Plutonium Isotopic Thorium Isotopic Uranium Iron-55 Date Signature Time Custody Released Date Signature Time Custody Released Time Custody Released	
□ Rush/Priority (should be prearranged and have supervisory appro ANALYSIS REQUESTED (For questions, please call 510-620-2911) □ Gross Alpha □ Gross Beta □ Total Uranium □ Total Beta □ Total Radium □ Tritium (³H □ Radium-226 □ Carbon-14 □ Radium-228 □ lodine-131 □ Radon-222 □ Strontium-0 □ Other (Specify); □ Nickel-63 CHAIN OF CUSTODY 1. □ Date Name (Print) □ Time Custody Received Organization 2. □ Date Name (Print) □ Time Custody Received Organization Name (Print) □ Time Custody Received Organization LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt: □ Acceptable □ Broken Container	Gamma Scan Gam	



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0176

Investigator: Alan Rook

RHB

Requestor: Roger Lupo

RHB

500 S Kreamer Blvd., Suite 235

CDPH - RHB, 1500 Capitol Av., MS 7610

CA

CA 92821 Sacramento

95814-5006

Phone Number: 714-524-1880

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / Sediment / 1st Qtr 2013 System No:

Billing Agency: RHB

Samples Received by Lab: 3/6/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0176-01

Sample Type: Soil/Sediment

0.957

Sample ID:

R 93007

Time Collected: 3/4/2013

13:30

Sampling Point: Unit 3 SE SSA

Dry Wt/Wet Wt

K-40

HASL Ga-01-R

18.1 +/- 0.405

0.192

pCi/g dry wt



Task ID: 13-0176

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

State of California - Health and Welfare Agency California Department of Public Health **REQUEST FOR SAMPLE ANALYSIS (Radiochemical)** Sanitation and Radiation Laboratories Branch Date Received Lab No. (Leave Blank) 850 Marina Bay Parkway, G164 Richmond, CA 94804 Serial Number 510-620-2911 Collector Information Reporting Information RHB BREA Name: Name: SACRAMEN Dept./Branch: Dept./Branch: Address: Address: Telephone No.: Telephone No.: Sample Information Billing Agency UNIT System Name / Facility: DWFOB() 🖺 RWQCB() RHB DTSC Sampling Point (s): O DWTPB ☐ FDB DWR ☐ CDFG ☐ EMB ☐ Other (Specify) System No.: TYPE OF SAMPLE (Check all applicable boxes) Drinking Water Groundwater Surface Water Wastewater ☐ Water Treatment Plant (WTP) ☐ Distribution System Point of Use (POU) ☐ Raw Treated (circle one): Chlorinated / Chlorinated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted Air Filters Date/Time Seawater ☐ Sludge (Semi-solid Samples) Finishing: ☐ Milk Soil/Sediment Starting: □ Wipes ☐ Biota (Type): Net (M³) Radon Canister Other: ____ Air Charcoal Cartridge COMMENTS: (Cautions, etc.): SHORDINE SEVINDE SAMPUNG ☐ Field Treatment: Preservatives added: Other: ☐ Field Measurement: mR/hr ☐ Radionuclide(s), if known: Rush/Priority (should be prearranged and have supervisory approval) ANALYSIS REQUESTED (For questions, please call 510-620-2911) Gross Alpha □ Gross Beta √ Gamma Scan ☐ Total Uranium ☐ Total Beta (LSC) ■ NORM (Gamma) ☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium ☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium ☐ Radium-228 ☐ lodine-131 ☐ Isotopic Thorium ☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium Other (Specify); ☐ Nickel-63 ☐ Iron-55 CHAIN OF CUSTODY Name (Print) Time Custody Received Organization Time Custody Released Date Name (Print) Date Time Custody Received Organization Signature Time Custody Released Name (Print) Time Custody Received Organization Signature Time Custody Released

LABORATORY REMARKS (Leave Blank) Condition at Time of Receipt: Acceptable **Broken Container** Leaked in Transit Improper Container Holding Time Exceeded Sample Not Cooled Insufficient Sample Preservatives/Carriers: Added While Sampling Added in Laboratory □ Not Added Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0175

Investigator: Alan Rook

RHB

Requestor: Roger Lupo

RHB

500 S Kreamer Blvd., Suite 235

CDPH - RHB, 1500 Capitol Av., MS 7610

CA 92821 Sacramento

95814-5006

Phone Number: 714-524-1880

Phone Number: 916-440-7955

CA

Site/Project Name: San Onofre NPP / Sediment / 1st Qtr 2013

System No:

Billing Agency: RHB

Samples Received by Lab: 3/6/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0175-01

Sample ID:

R 93006

Time Collected: 3/4/2013

0.947

13:00

Sampling Point: San Onofre

Dry Wt/Wet Wt

Sample Type: Soil/Sediment

K-40

HASL Ga-01-R

18.4 +/- 0.415

0.213

⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical) Lab No. (Leave Blank) **Date Received** Sanitation and Radiation Laboratories Branch 3-1117 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 1300 Reporting Information Collector Information Name: Name: Dept./Branch: Dept./Branch: Address: Address: Telephone No.: Telephone No.: **Billing Agency** Sample Information DWFOB() RWQCB() ☐ DTSC System Name / Facility: **⊠** RHB DWR CDFG O DWTPB ☐ FDB Sampling Point (s): □ EMB ☐ Other (Specify) System No.: TYPE OF SAMPLE (Check all applicable boxes) ☐ Groundwater ☐ Surface Water ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Wastewater Drinking Water Point of Use (POU) Raw Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted ☐ Sludge (Semi-solid Samples) Date/Time ☐ Seawater ☐ Air Filters ☐ Milk Soil/Sediment Finishing: ☐ Biota (Type): Wipes Starting: □ Radon Canister Other: Net (M3) ☐ Air Charcoal Cartridge COMMENTS: (Cautions, etc.): SHORDINE STONE SAMPLIA Iced/Frozen: Other: ☐ Field Treatment: Preservatives added: _____ ☐ Field Measurement: mR/hr ☐ Radionuclide(s), if known: Rush/Priority (should be prearranged and have supervisory approval) ANALYSIS REQUESTED (For questions, please call 510-620-2911) ☐ Gross Beta Gamma Scan Gross Alpha ☐ NORM (Gamma) ☐ Total Beta (LSC) ☐ Total Uranium ☐ Tritium (³H) ☐ Isotopic Americium / Curium □ Total Radium ☐ Isotopic Plutonium ☐ Carbon-14 ☐ Radium-226 ☐ lodine-131 □ Isotopic Thorium ☐ Radium-228 ☐ Isotopic Uranium ☐ Strontium-89, 90 ☐ Radon-222 ☐ Nickel-63 ☐ Iron-55 Other (Specify): CHAIN OF CUSTODY Name (Print) Time Custody Released Time Custody Received Organization 2. Name (Print) Date Time Custody Released Signature Time Custody Received Organization Date Name (Print) man Wall Time Custody Released Organization Time Custody Received LABORATORY REMARKS (Leave Blank) Condition at Time of Receipt: Acceptable Broken Container Leaked in Transit Improper Container

Insufficient Sample

Not Added

Not Applicable

☐ Holding Time Exceeded
Preservatives/Carriers:

Added While Sampling

a

a

Sample Not Cooled

Added in Laboratory



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0174

Investigator: Alan Rook

RHB

Requestor: Roger Lupo

RHB

500 S Kreamer Blvd., Suite 235

CA 92821 CDPH - RHB, 1500 Capitol Av., MS 7610

CA

95814-5006

Phone Number: 714-524-1880

Sacramento Phone Number: 916-440-7955

System No:

K-40

Site/Project Name: San Onofre NPP / Sediment / 1st Qt 2013

HASL Ga-01-R

Billing Agency: RHB

Samples Received by Lab: 3/6/2013

0.209

pCi/g dry wt

Parameter Method Result +/- CE MDA 95 Units R 93005 Time Collected: 3/4/2013 12:20 Sampling Point: San Onofre Lab No: 13-0174-01 Sample ID: State Beach, Sample Type: Soil/Sediment SSA 03 0.905 Dry Wt/Wet Wt

5.16 +/- 0.136

(1) Precision criteria for these method were determined to be acceptable.

(2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

(3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMP	LE ANALYSIS (Radiochemical)
Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164	Date Received Lab No. (Leave Blank)
Richmond, CA 94804	3-6-13 12 13 12 14
510-620-2911	Date & Time Sampled
Collector Information Name: RHB BRIA	Reporting Information Name: ROGER LUPO
1141-	promo:
Dept./Branch: Address:	Dept./Branch: Address: RHB SACRAMENTO
Telephone No.: (7/4) 524 - 1090	Telephone No.:
Sample Information SONGS STATE	Billing Agency RAU
System Name / Facility: Sampling Point (s): (SSA 43) PARK	D DWFOB() X RHB D RWQCB() D DTSC D DWTPB D FDB D DWR D CDFG
PEML	☐ EMB ☐ Other (Specify)
System No.: SAN ONDE STATE BEACH	
TYPE OF SAMPLE (Check all applicable boxes)	
☐ Drinking Water ☐ Groundwater	Surface Water Wastewater
	P) Distribution System Point of Use (POU)
Treated (circle one): Chlorinated / Chloriaminated / Chlorine t	Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters Date/Time	☐ Seawater ☐ Sludge (Semi-solid Samples)
Finishing:	☐ Milk ☐ Soil/Sediment
Starting:	☐ Wipes ☐ Biota (Type):
Net (M³)	☐ Radon Canister ☐ Other:
☐ Air Charcoal Cartridge	
COMMENTS: (Cautions, etc.): SHORDINE SOL	MADIT SAMPUNG
☐ Field Treatment: Preservatives added:	lced/Frozen: Other:
Field Measurement:mR/hr	☐ Radionuclide(s), if known:
☐ Rush/Priority (should be prearranged and have supervisory a	pproval)
ANALYSIS REQUESTED (For questions, please call 510-620-29	911)
☐ Gross Alpha ☐ Gross E	Beta
☐ Total Uranium ☐ Total Bo	eta (LSC) NORM (Gamma)
☐ Total Radium ☐ Tritium	(3H) Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon	-14
□ Radium-228 □ lodine-1	131 Sotopic Thorium
☐ Radon-222 ☐ Strontiu	ım-89, 90 ☐ Isotopic Uranium
☐ Other (Specify); ☐ Nickel-6	53 Iron-55
CHAIN OF CUSTODY	
1. 3/4/28/3 HA Kerk Name (Print)	3/5/2013
12.20 RHR BOW	Date 1530
Time Custody Received Organization	Signature Time Custody Released
Date Name (Print)	Date
Time Custody Received Organization	Signature Time Custody Released
3. Date Name (Print)	Date
11.85 DWRIB	- Wylmin M Ch
Time Custody Received Organization	Signature Time Custody Released
LABORATORY REMARKS (Leave Blank) A. Condition at Time of Receipt:	
Acceptable	Leaked in Transit
☐ Holding Time Exceeded ☐ Sample Not Cooled	☐ Insufficient Sample
B. Preservatives/Carriers: Added While Sampling Added in Laboratory	□ Not Added □ □ Not Applicable



Drinking Water and Radiation Laboratory Branch



850 Marina Bay Parkway, Richmond, CA 94804 Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 13-0173

Investigator: Alan Rook

RHB

Requestor: Roger Lupo

RHB

500 S Kreamer Blvd., Suite 235

CDPH - RHB, 1500 Capitol Av., MS 7610

CA

CA 92821 Sacramento

95814-5006

Phone Number: 714-524-1880

Phone Number: 916-440-7955

Site/Project Name: San Onofre NPP / Sediment / 1st Qtr 2013

System No:

Billing Agency: RHB

Samples Received by Lab: 3/6/2013

Parameter

Method

Result +/- CE

MDA 95

Units

Lab No: 13-0173-01

Sample Type: Soil/Sediment

Sample ID:

R 93004

Time Collected: 3/4/2013

0.929

10:15

Sampling Point: Newport Beach

SSA 04

Dry Wt/Wet Wt

K-40

HASL Ga-01-R

19.4 +/- 0.435

0.184



⁽¹⁾ Precision criteria for these method were determined to be acceptable.

⁽²⁾ CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.

⁽³⁾ MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 devided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particilar radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch	Date Received	Lab No. (Leave Blank)
850 Marina Bay Parkway, G164	3-6-13	13-0173
Richmond, CA 94804 510-620-2911	Date & Time Sampled	Serial Number
510-020-2911	3/4/2013 1015.	R 93004
Collector Information RIPS BOPA	Reporting Information	ROGER LUPO
Name:	Name: Dept./Branch:	SACRAMENTO
Dept./Branch: Address:	Address:	5 -MUCHMENTO
	Telephone No.:	
Telephone No.: (714) 524 - 1980 Sample Information	Billing Agency	· ·
System Name / Facility: NEWPORT REACH	DWFOB() X RHB D	RWQCB() DTSC
Sampling Point (s):		DWR CDFG
System No.: SSA 04	☐ EMB ☐ Other (Sp	ecify)
TYPE OF SAMPLE (Check all applicable boxes)		
☐ Drinking Water ☐ Groundwater ☐	☐ Surface Water	☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP)	Distribution System	Point of Use (POU)
Treated (circle one): Chlorinated / Chloraminated / Chlorine Dio	xide / Ozonated / Peroxizone / Fluc	ondated / Coagulated / pri Adjusted
☐ Air Filters Date/Time	☐ Seawater	☐ Sludge (Semi-solid Samples)
Finishing:	☐ Milk **	Soil/Sediment
Starting:	☐ Wipes	☐ Biota (Type):
Net (M ³)	☐ Radon Canister	Other:
☐ Air Charcoal Cartridge		
COMMENTS: (Cautions, etc.):	WAR SAMPING	
☐ Field Treatment: Preservatives added:	/Iced/Frozen:(Other:
<u> </u>		
☐ Field Measurement: mR/hr	☐ Radionuclide(s), if known:	
☐ Field Measurement:mR/hr ☐ Rush/Priority (should be prearranged and have supervisory appl		
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